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S6834

ERASABLE AND ELECTRICALLY PROGRAMMABLE READ ONLY MEMORY

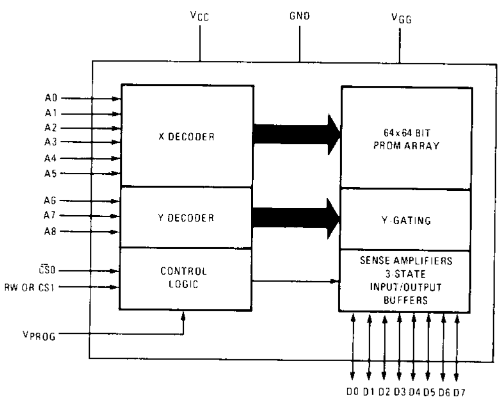
Features

- ☐ On-Board Programmability
- ☐ Fast Access Time — 575ns Typ.
- ☐ Pin Configuration Similar to the S6830 1K x 8 Bit ROM
- ☐ High Speed Programming — Less than 1 Minute for All 4096 Bits
- ☐ Programmed with R/W, CS and V_{PROG} Pins
- ☐ Completely TTL Compatible — Excluding the V_{PROG} Pin
- ☐ Ultraviolet Light Erasable — Less than 10 Minutes
- ☐ Static Operation — No Clocks Required
- ☐ Three-State Data I/O
- ☐ Standard Power Supplies +5V and −12V
- ☐ Mature P-Channel Process

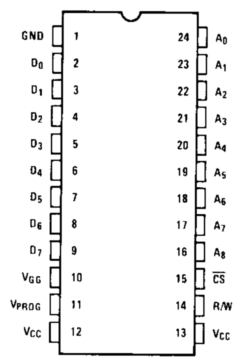
General Description

The S6834 is a high speed, static, 512 x 8 bit, erasable and electrically programmable read only memory designed for use in bus-organized systems. Both input and output are TTL compatible during both read and write modes. Packaged in a 24 pin hermetically sealed dual in-line package the bit pattern can be erased by exposing the chip to an ultra-violet light source through the transparent lid, after which a new pattern can be written.

Block Diagram



Pin Configuration



Typical Applications

- ☐ ROM Program Debugging
- ☐ Code Translation
- ☐ Microprogramming
- ☐ Look-up Tables
- ☐ Random Logic Replacement
- ☐ Programmable Waveforms
- ☐ Character Generation
- ☐ Electronic Keyboards

ABSOLUTE MAXIMUM RATINGS

Voltage on any pin relative to V_{SS} except the V_{PROG} pin	+0.3 to −20V
Voltage on the V_{PROG} pin relative to V_{SS}	+0.3 to −60V
Operating Temperature	0°C to +70°C
Storage Temperature (programmed)	−55°C to +85°C
Storage Temperature (unprogrammed)	−55°C to 150°C

NOTE:
This device contains circuitry to protect the inputs against damage due to high static voltages or electric fields, however, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this high-impedance circuit.

DC (STATIC) CHARACTERISTICS (V_{CC} = +5.0V ± 5%, V_{GG} = −12.0V ± 5% T_A = 0 – 70°C unless otherwise noted).

SYMBOL	CHARACTERISTIC	MIN	MAX	UNIT
V_{IL}	INPUT VOLTAGE LOW		0.8	V
V_{IH}	INPUT VOLTAGE HIGH	V_{CC} −2.25	V_{CC} +.3	V
V_{OL}	OUTPUT VOLTAGE LOW I_{OL} = 1.6 ma		0.4	V
V_{OH}	OUTPUT VOLTAGE HIGH I_{OH} = 200μA	2.4		V
I_{LI}	INPUT LEAKAGE CURRENT		10	μa
I_{LO}	OUTPUT LEAKAGE CURRENT CS = 5V		20	μa
I_{GG}	V_{GG} SUPPLY CURRENT		45	ma
I_{CC}	V_{CC} SUPPLY CURRENT		50	ma
P_D	POWER DISSIPATION		750	mw

NOTE: Program input V_{PROG} may be tied to V_{CC} during the Read.

EPROMs

AC (DYNAMIC) CHARACTERISTICS (Loading is as shown in Figure 1 unless otherwise noted).

SYMBOL	CHARACTERISTIC	MIN	MAX (6834)	MAX (6834−1)	UNIT
T_{ACC}	ACCESS TIME		575	750	ns
T_{CO}	CHIP SELECT TO OUTPUT DELAY		300	400	ns
T_{DD}	CHIP DESELECT TO OUTPUT DELAY		250	325	ns